

Amendments to the Claims:

This listing of the claims will replace all prior versions/listings of claims in the application:

Listing of Claims

1. (currently amended) A method of forming an orthodontic wire, comprising, in combination, the steps of:

placing a composite of straight fiber and resin in an elongate tunnel of a shrinkable die formed of a heat sensitive material that shrinks in response to heat, the tunnel having a pre-defined transversal cross-sectional shape and having an open end for allowing removal of excess resin;

shrinking the die by heating the die to reduce the transversal cross-section of the tunnel along a longitudinal extent of the tunnel so as to compress the composite of fiber and resin to assume the pre-defined transversal cross-sectional shape;

curing the composite of fiber and resin, to form the orthodontic wire, and separating the die from the orthodontic wire;

wherein the tunnel assumes the pre-defined cross-sectional shape and size after said die is completely shrunk and shrinks uniformly in cross-sectional area as the die is shrunk;

placing a composite of fiber and resin in a shrinkable die having a length and a top and a bottom, wherein the composite is formed of a material that shrinks in response to heat;

heating the die containing the composite to shrink the die and cure and shrink the composite, wherein the composite is shrunk to a pre-determined transversal cross-sectional shape, and heating occurs gradually along the length of the die, such that shrinking occurs at one of the top and the bottom prior to occurring at the other of the top and the bottom; and

separating the composite from the die.

2. (Currently Amended) The method of claim 1, wherein the ~~shrinking comprises shrinking the die completely to compress the composite of fiber and resin into a pre-determined transversal cross-sectional shape. die has at least one opening, and excess resin can leave the die during the step of heating the die.~~
3. (Currently Amended) The method of claim 2 wherein the curing comprises curing the composite fiber and resin in the die so that the composite of fiber and resin retains ~~it's~~ the pre-determined transversal cross-sectional shape after it is separated the step of separating the composite from the die.
4. (Currently Amended) The method of claim 3, ~~wherein the die is bendable lengthwise, and further comprising bending the die lengthwise so as to shape the composite of fiber and resin in the die further comprising the step of bending the shrinkable die containing the composite prior to the step of heating, and thereby forming a curved profile.~~
5. (Currently Amended) The method of claim 4 ~~wherein the curing is performed after the shrinking and bending further comprising the step of pulling on the fiber during the step of heating the die.~~
6. (canceled)
7. (Currently Amended) The method of claim 1 wherein the fiber comprises a plurality of elongated strands each having a length longer than the length of the die, tunnel.
8. (Currently Amended) The method of claim 7, wherein the placing comprises pulling the plurality of strands into and through ~~the tunnel~~ of the die.

9. (Currently Amended) The method of claim 8, further comprising pulling ~~each one of~~ on the plurality of strands at both ends so as to straighten it in the die in directions ~~towards the top of the die and towards the bottom of the die.~~

10. (original) The method of claim 8, further comprising impregnating the plurality of strands with the resin prior to the pulling.

11. (Currently Amended) The method of claim 10, further comprising, after the pulling, adding additional resin ~~in the tunnel of~~ to the die so as to further fill the ~~tunnel~~ die.

12. (Currently Amended) The method of claim 1, wherein said composite is placed in said die by placing the fiber in the tunnel of the die, and thereafter adding resin in the ~~tunnel~~ die.

13. (canceled).

14. (original) The method of claim 4, wherein the bending comprises bending the die to shape the composite of fiber and resin into an arched wire suitable for use in an orthodontic treatment.

15. – 23. (Canceled)